WHAT IS CLAIMED IS:

1. A method of inhibiting the proliferation of a cancer cell comprising administering, to the cancer cell, an effective amount of a molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 in the cancer cell.
2. The method of claim 1, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a nucleic acid, in expressible form, encoding the Bivalent Prostate Carcinoma Tumor Antigen-1.
3. The method of claim 2, wherein the nucleic acid is administered to the cancer cell by infecting the cancer cell with a viral vector containing the nucleic acid operatively linked to a promoter element.
4. The method of claim 2, where the nucleic acid comprises a region having the nucleic acid sequence as set forth in FIGURE 9 (SEQ ID NO: 3).
5. The method of claim 2, where the nucleic acid comprises a region which hybridizes to a nucleic acid having the sequence set forth in FIGURE 9 (SEQ ID NO:3), under stringent conditions.
6. The method of claim 1, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a Bivalent Prostate Carcinoma Tumor Antigen-1 protein
7. The method of claim 6, where the Bivalent Prostate Carcinoma Tumor Antigen-1 protein has a sequence as set forth in FIGURE 10 (SEQ ID NO:6).
8. The method of claim 2, which further comprises administering, to the cancer cell, an effective amount of a differentiation-promoting agent or cytokine.
9. The method of claim 6, which further comprises administering, to the cancer cell, an effective amount of a differentiation-promoting agent or cytokine.
10. The method of claim 1, where the cancer cell is a prostate cancer cell.
11. The method of claim 1, where the cancer cell is a melanoma cell.
12. A method of inhibiting the metastasis of a cancer cell comprising administering, to the cancer cell, an effective amount of a molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 in the cancer cell.

13. The method of claim 12, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a nucleic acid, in expressible form, encoding the Bivalent Prostate Carcinoma Tumor Antigen-1.

14. The method of claim 13, wherein the nucleic acid is administered to the cancer cell by infecting the cancer cell with a viral vector containing the nucleic acid operatively linked to a promoter element.

15. The method of claim 13, where the nucleic acid comprises a region having the nucleic acid sequence as set forth in FIGURE 9 (SEQ ID NO: 3).

16. The method of claim 13, where the nucleic acid comprises a region which hybridizes to a nucleic acid having the sequence set forth in FIGURE 9 (SEQ ID NO:3), under stringent conditions.

17. The method of claim 12, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a Bivalent Prostate Carcinoma Tumor Antigen-1 protein.

18. The method of claim 17, where the Bivalent Prostate Carcinoma Tumor Antigen-1 protein has a sequence as set forth in FIGURE 10 (SEQ ID NO:6).

19. The method of claim 13 which further comprises administering, to the cancer cell, an effective amount of a differentiation-promoting agent or cytokine.

20. The method of claim 17, which further comprises administering, to the cancer cell, an effective amount of a differentiation-promoting agent or cytokine.

21. The method of claim 12, where the cancer cell is a prostate cancer cell.

22. The method of claim 12, where the cancer cell is a melanoma cell.

23. A method of treating a cancer in a subject, comprising administering, to the subject, an effective amount of a molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 in the subject.

24. The method of claim 23, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a nucleic acid, in expressible form, encoding the Bivalent Prostate Carcinoma Tumor Antigen-1.

25. The method of claim 24, wherein the nucleic acid is administered to the subject by administering, to the subject, an effective number of viral vectors containing the nucleic acid operatively linked to a promoter element.

26. The method of claim 24, where the nucleic acid comprises a region having the nucleic acid sequence as set forth in FIGURE 9 (SEQ ID NO: 3).

27. The method of claim 24, where the nucleic acid comprises a region which hybridizes to a nucleic acid having the sequence set forth in FIGURE 9 (SEQ ID NO:3), under stringent conditions.

28. The method of claim 23, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a Bivalent Prostate Carcinoma Tumor Antigen-1 protein.

29. The method of claim 28, where the Bivalent Prostate Carcinoma Tumor Antigen-1 protein has a sequence as set forth in FIGURE 10 (SEQ ID NO:6).

30. The method of claim 24, which further comprises administering, to the subject, an effective amount of a differentiation-promoting agent or cytokine.

31. The method of claim 28, which further comprises administering, to the subject, an effective amount of a differentiation-promoting agent or cytokine.

32. The method of claim 23, where the cancer is prostate cancer.

33. The method of claim 23, where the cancer is melanoma.

34. A method of inhibiting the metastatic spread of cancer in a subject, comprising administering, to the subject, an effective amount of a molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 in the subject.

35. The method of claim 34, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a nucleic acid, in expressible form, encoding the Bivalent Prostate Carcinoma Tumor Antigen-1.

36. The method of claim 35, wherein the nucleic acid is administered to the subject by administering, to the subject, an effective number of viral vectors containing the nucleic acid operatively linked to a promoter element.

37. The method of claim 35, where the nucleic acid comprises a region having the nucleic acid sequence as set forth in FIGURE 9 (SEQ ID NO: 3).

38. The method of claim 35, where the nucleic acid comprises a region which hybridizes to a nucleic acid having the sequence set forth in FIGURE 9 (SEQ ID NO:3), under stringent conditions.

39. The method of claim 34, where the molecule which increases the level of a Bivalent Prostate Carcinoma Tumor Antigen-1 is a Bivalent Prostate Carcinoma Tumor Antigen-1 protein.

40. The method of claim 39, where the Bivalent Prostate Carcinoma Tumor Antigen-1 protein has a sequence as set forth in FIGURE 10 (SEQ ID NO:6).

41. The method of claim 34, which further comprises administering, to the subject, an effective amount of a differentiation-promoting agent or cytokine.

42. The method of claim 34, which further comprises administering, to the subject, an effective amount of a differentiation-promoting agent or cytokine.

43. The method of claim 34, where the cancer is prostate cancer.

44. The method of claim 34, where the cancer is melanoma.

45. A method of identifying a malignant cell in a tissue comprising detecting, in the cell, a truncated Prostate Carcinoma Tumor Antigen -1 protein.

46. A method of diagnosing a cancer in a subject, comprising detecting, in a cell collected from the subject, a truncated Prostate Carcinoma Tumor Antigen -1 protein.

47. A method of inducing a transformed phenotype in a cell, comprising introducing, into the cell, a nucleic acid encoding a truncated Prostate Carcinoma Tumor Antigen -1 protein, in expressible form.

48. A composition comprising a therapeutically effective amount of a nucleic acid encoding a Bivalent Prostate Carcinoma Tumor Antigen -1 protein, in expressible form.

49. The therapeutic composition of claim 48, wherein the nucleic acid comprises a region having the nucleic acid sequence as set forth in FIGURE 9 (SEQ ID NO: 3).

50. The therapeutic composition of claim 48, wherein the nucleic acid comprises a region which hybridizes to a nucleic acid having the sequence set forth in FIGURE 9 (SEQ ID NO:3), under stringent conditions.

51. The therapeutic composition of claim 49, where the nucleic acid is contained in a viral vector.

52. The therapeutic composition of claim 50, where the nucleic acid is contained in a viral vector.

53. A composition comprising a therapeutically effective amount of a Bivalent Prostate Carcinoma Tumor Antigen -1 protein.

54. The composition of claim 53, where the protein has an amino acid sequence as depicted in FIGURE 10 (SEQ ID NO:6).

55. A cell culture system comprising a cell into which has been introduced a nucleic acid encoding a Bivalent Prostate Carcinoma Tumor Antigen-1 protein.

56. An assay system for identifying agents that suppress the transformed phenotype, comprising the cell culture system of claim 55.

57. A cell culture system comprising a cell into which has been introduced a nucleic acid encoding a Truncated Prostate Carcinoma Tumor Antigen-1 protein.

58. An assay system for identifying agents that suppress the transformed phenotype, comprising the cell culture system of claim 57.

59. A non-human transgenic animal carrying a transgene which encodes a Bivalent Prostate Carcinoma Tumor Antigen-1 protein.

60. A non-human transgenic animal carrying a transgene which encodes a Truncated Prostate Carcinoma Tumor Antigen-1 protein.

61. A non-human transgenic animal whose cells comprise the nucleic acid having the sequence of SEQ ID NO.:3.

62. The non-human transgenic animal of Claim 61, wherein the nucleic acid having the sequence of SEQ ID NO.:3 is operably linked to a promoter.

63. The non-human transgenic animal of Claim 62, wherein the promoter is the human elongation factor 1α promoter.

64. The non-human transgenic animal of any one of Claims 61 to 63, wherein the cells of said non-human transgenic animal further comprises the nucleic acid encoding the SV40 T antigen.

65. The non-human transgenic animal of Claim 64, wherein the nucleic acid encoding the SV40 T antigen is operably linked to a promoter.

66. The non-human transgenic animal of Claim 65, wherein the promoter is the prostate cell-specific rat probasin promoter.

67. A non-human transgenic animal whose cells express a greater level of B-PCTA-1 protein as compared to the level of B-PCTA-1 protein expressed in a non-transgenic mouse of the same inbred strain.

68. A non-human transgenic animal having increased human B-PCTA-1 protein activity as compared to a non-human non-transgenic animal of the same inbred strain.

69. A non-human transgenic animal whose cells express a greater level of B-PCTA-1 mRNA as compared to the level of B-PCTA-1 mRNA expressed in a non-human non-transgenic animal of the same inbred strain.

70. The use of the Bivalent Prostate Carcinoma Tumor Antigen-1 nucleic acid for preparing a therapeutic composition for inhibiting the proliferation of a cancer cell.

71. The use of the Bivalent Prostate Carcinoma Tumor Antigen-1 nucleic acid for preparing a therapeutic composition for inhibiting the metastasis of a cancer cell.

72. The use of the Bivalent Prostate Carcinoma Tumor Antigen-1 nucleic acid for preparing a therapeutic composition for treating a cancer in a subject.

73. The use of the Bivalent Prostate Carcinoma Tumor Antigen-1 nucleic acid for preparing a therapeutic composition for inhibiting the metastatic spread of cancer in a subject.